

10/532, 196

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NEWS 4 APR 04 STN AnaVist \$500 visualization usage credit offered  
NEWS 5 MAY 10 CA/CAplus enhanced with 1900-1906 U.S. patent records  
NEWS 6 MAY 11 KOREAPAT updates resume  
NEWS 7 MAY 19 Derwent World Patents Index to be reloaded and enhanced  
NEWS 8 MAY 30 IPC 8 Rolled-up Core codes added to CA/CAplus and  
USPATFULL/USPAT2  
NEWS 9 MAY 30 The F-Term thesaurus is now available in CA/CAplus  
NEWS 10 JUN 02 The first reclassification of IPC codes now complete in  
INPADOC  
NEWS 11 JUN 26 TULSA/TULSA2 reloaded and enhanced with new search and  
and display fields  
NEWS 12 JUN 28 Price changes in full-text patent databases EPFULL and PCTFULL  
NEWS 13 JUL 11 CHEMSAFE reloaded and enhanced  
NEWS 14 JUL 14 FSTA enhanced with Japanese patents  
NEWS 15 JUL 19 Coverage of Research Disclosure reinstated in DWPI  
NEWS 16 AUG 09 INSPEC enhanced with 1898-1968 archive  
NEWS 17 AUG 28 ADISCTI Reloaded and Enhanced  
NEWS 18 AUG 30 CA(SM)/CAplus(SM) Austrian patent law changes

NEWS EXPRESS JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT  
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.

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FILE 'HOME' ENTERED AT 10:06:44 ON 01 SEP 2006

=>  
=> file caplus  
COST IN U.S. DOLLARS  
  
FULL ESTIMATED COST

|                     |      |                  |      |
|---------------------|------|------------------|------|
| SINCE FILE<br>ENTRY | 0.21 | TOTAL<br>SESSION | 0.21 |
|---------------------|------|------------------|------|

FILE 'CAPLUS' ENTERED AT 10:06:59 ON 01 SEP 2006  
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FILE COVERS 1907 - 1 Sep 2006 VOL 145 ISS 10  
FILE LAST UPDATED: 30 Aug 2006 (20060830/ED)

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```
=> berberine  
BERBERINE IS NOT A RECOGNIZED COMMAND  
The previous command name entered was not recognized by the system.  
For a list of commands available to you in the current file, enter  
"HELP COMMANDS" at an arrow prompt (>).
```

=> s berberine  
3834 BERBERINE  
83 BERBERINES  
L1 3853 BERBERINE  
(BERBERINE OR BERBERINES)

FILE 'REGISTRY' ENTERED AT 10:07:55 ON 01 SEP 2006  
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STRUCTURE FILE UPDATES: 30 AUG 2006 HIGHEST RN 905475-39-0  
DICTIONARY FILE UPDATES: 30 AUG 2006 HIGHEST RN 905475-39-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

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REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

```
=> s 11  
L2      258 BERBERINE  
  
=> d 1 hitstr  
'HITSTR' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'
```

The following are valid formats:

Substance information can be displayed by requesting individual fields or predefined formats. The predefined substance formats are: (RN = CAS Registry Number)

|        |   |
|--------|---|
| REG    | - RN  |
| SAM    | - Index Name, MF, and structure - no RN                 |
| FIDE   | - All substance data, except sequence data              |
| IDE    | - FIDE, but only 50 names                               |
| SQIDE  | - IDE, plus sequence data                               |
| SQIDE3 | - Same as SQIDE, but 3-letter amino acid codes are used |
| SQD    | - Protein sequence data, includes RN                    |
| SQD3   | - Same as SQD, but 3-letter amino acid codes are used   |
| SQN    | - Protein sequence name information, includes RN        |
| CALC   | - Table of calculated properties                        |
| EPROP  | - Table of experimental properties                      |
| PROP   | - EPROP and CALC  |

Any CA File format may be combined with any substance format to obtain CA references citing the substance. The substance formats must be cited first. The CA File predefined formats are:

|       |  |
|-------|--|
| ABS   | -- Abstract  |
| APPS  | -- Application and Priority Information                      |
| BIB   | -- CA Accession Number, plus Bibliographic Data              |
| CAN   | -- CA Accession Number                                       |
| CBIB  | -- CA Accession Number, plus Bibliographic Data (compressed) |
| IND   | -- Index Data  |
| IPC   | -- International Patent Classification                       |
| PATS  | -- PI, SO  |
| STD   | -- BIB, IPC, and NCL   |
| IABS  | -- ABS, indented, with text labels                           |
| IBIB  | -- BIB, indented, with text labels                           |
| ISTD  | -- STD format, indented                                      |
| OBIB  | ----- AN, plus Bibliographic Data (original)                 |
| OIBIB | ----- OBIB, indented with text labels                        |
| SBIB  | ----- BIB, no citations                                      |
| SIBIB | ----- IBIB, no citations                                     |

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.

The MAX format is the same as ALL.

The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

For additional information, please consult the following help messages:

```
HELP DFIELDS -- To see a complete list of individual display fields.  
HELP FORMATS -- To see detailed descriptions of the predefined formats.  
ENTER DISPLAY FORMAT (IDE):end
```

=> file caplus  
COST IN U.S. DOLLARS  
FULL ESTIMATED COST

| SINCE FILE ENTRY | TOTAL SESSION |
|------------------|---------------|
| 6.08             | 9.16          |

FILE 'CAPLUS' ENTERED AT 10:09:53 ON 01 SEP 2006  
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FILE COVERS 1907 - 1 Sep 2006 VOL 145 ISS 10  
FILE LAST UPDATED: 30 Aug 2006 (20060830/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> s 12  
L3 4101 L2  
  
=> s 13 and analgesic effects of morphine  
42113 ANALGESIC  
41945 ANALGESICS  
55704 ANALGESIC  
(ANALGESIC OR ANALGESICS)  
2631845 EFFECTS  
40765 MORPHINE  
170 MORPHINES  
40813 MORPHINE  
(MORPHINE OR MORPHINES)  
259 ANALGESIC EFFECTS OF MORPHINE  
(ANALGESIC(W)EFFECTS(1W)MORPHINE)  
L4 1 L3 AND ANALGESIC EFFECTS OF MORPHINE

=> d ibib abs hitstr tot

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:387262 CAPLUS

DOCUMENT NUMBER: 140:368726

TITLE: Medicament component of berberine for the use of prevention and treatment of psychological dependence on and analgesic tolerance to morphine

INVENTOR(S): Jang, Choon-Gon; Lee, Seok-Yong

PATENT ASSIGNEE(S): Sungkyunkwan University, S. Korea

SOURCE:

CODEN: PIXXDZ

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE       |
|---|------|----------|------------------|------------|
| WO 2004019372   | A1   | 20040513 | WO 2003-KR2280   | 20031027   |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LV, MA, MD, MG, MK, MU, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RD, PU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |      |          |                  |            |
| PW: GH, GM, KE, LS, MM, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SH, TD, TG  |      |          |                  |            |
| KR 2004037511   | A    | 20040507 | KR 2002-66029    | 20021025   |
| AU 2003273114   | A1   | 20040525 | AU 2003-273114   | 20031027   |
| CN 1713911  | A    | 20051228 | CN 2003-80102287 | 20031027   |
| JP 2005506460   | TZ   | 20060223 | JP 2005-501562   | 20031027   |
| US 2006035917   | A1   | 20060216 | US 2005-532196   | 20050421   |
|   |      |          | KR 2002-66029    | A 20021029 |
|   |      |          | KR 2003-60353    | A 20030629 |
|   |      |          | WO 2003-KR2280   | W 20031027 |

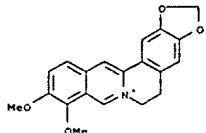
AB Disclosed is a pharmaceutical compn. for preventing and treating addiction to morphine or preventing and inhibiting the development of tolerance to the analgesic effects of morphine, contg. berberine as an effective ingredient, wherein the berberine has an inhibitory effect vs. psychol. dependence on abused drugs such as morphine and the increase of spontaneous locomotor activity upon administration of the drugs. The pharmaceutical compn. and a *Coptis japonica* plant ext. of the invention, which contain berberine, are highly effective in inhibiting the aforementioned symptoms of morphine addiction, and are thus useful for prevention and treatment of addiction to abused drugs such as morphine. In addn., the pharmaceutical compn. addnl. contg. a pharmaceutically acceptable carrier can be applied to prevent and inhibit morphine tolerance caused by repeated administration of morphine, while not affecting the analgesic effects of morphine upon a single administration.

IT 2086-83-1, Berberine  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

(berberine for prevention and treatment of psychol. dependence on, and analgesic tolerance to, morphine)

RN 2086-83-1 CAPLUS  
CN Benzolo[*g*:1,1-benzodioxolo[5,6-*a*]quinolizinium,  
5,6-dihydro-9,10-dimethoxy-  
(9CI) (CA INDEX NAME)



```
=> s berberine morphine
    3834 BERBERINE
      83 BERBERINES
    3853 BERBERINE
      (BERBERINE OR BERBERINES)
  40765 MORPHINE
    170 MORPHINES
  40813 MORPHINE
      (MORPHINE OR MORPHINES)
L5      5 BERBERINE MORPHINE
      (BERBERINE(W)MORPHINE)
```

```
=> d ibib abs hitstr tot
```

## LS ANSWER 1 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:1387262 CAPLUS

DOCUMENT NUMBER: 140:368726

TITLE: Medicament component of berberine for the use of prevention and treatment of psychological dependence on and analgesic tolerance to morphine

INVENTOR(S): Jang, Choon-Gon; Lee, Seok-Yong

PATENT ASSIGNEE(S): Sungkyunkwan University, S. Korea

SOURCE: PCT Int. Appl., 19 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE       |
|---|------|----------|------------------|------------|
| WO 2004039372   | A1   | 20040513 | WO 2003-KR2280   | 20031027   |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LV, LV, MA, MD, MG, MK, MM, MW, MX, MZ, NJ, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TP, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW |      |          |                  |            |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG  |      |          |                  |            |
| KP 2004037511   | A    | 20040507 | KP 2002-66029    | 20021029   |
| AU 2003273114   | A1   | 20040525 | AU 2003-373114   | 20031027   |
| CN 1713911  | A    | 20051228 | CN 2003-80102207 | 20031027   |
| JF 2006500460   | TZ   | 20060221 | JP 2005-50186C   | 20031027   |
| US 2006035917   | A1   | 20060216 | US 2005-532196   | 20050421   |
| PRIORITY APPLN. INFO.:  |      |          | KP 2002-66029    | A 20021029 |
|   |      |          | KP 2003-60353    | A 20030829 |
|   |      |          | WO 2003-KR2280   | W 20031027 |

AB Disclosed is a pharmaceutical compn. for preventing and treating addiction

to morphine or preventing and inhibiting the development of tolerance to the analgesic effects of morphine, contg. berberine as an effective ingredient, wherein the berberine has an inhibitory effect vs. psychol. dependence on abused drugs such as morphine and the increase of spontaneous locomotor activity upon administration of the drugs. The pharmaceutical compn. and a *Coptis japonica* plant, ext. of the invention, which contain berberine, are highly effective in inhibiting the aforementioned symptoms of morphine addiction, and are thus useful for prevention and treatment of addiction to abused drugs such as morphine. In addition, the pharmaceutical compn., addnl. contg. a pharmaceutically acceptable carrier can be applied to prevent and inhibit morphine tolerance caused by repeated administration of morphine, while not affecting the analgesic effects of morphine upon a single administration.

## LS ANSWER 2 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:13631 CAPLUS

DOCUMENT NUMBER: 137:134858

TITLE: Reinforcement by morphine the selective drinking motivation in rats

INVENTOR(S): Tan, Beiping; Chen, Jing; Yang, Xiaoyan; Sui, Nan

CORPORATE SOURCE: Institute of Psychology, Chinese Academy of Sciences, Beijing, 100101, Peop. Rep. China

SOURCE: Zhongguo Yaowu Yilaixinh Zaishi (2001), 10(4), 254-257

PUBLISHER: Zhongguo Yaowu Yilaixinh Yanjiuso

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB The effects of morphine on selective drinking behavior of rats were studied. The rats continuously or intermittently drank the berberine soln. (BH) or the berberine-morphine soln. (BH-MH). The ratio of selection of BH-MH to BH was used as the index in the test. The rats were tested once every three days for 2 wk. After 20 days, the morphine-sucrose soln. was given before the test to observe the intervention. The BH-MH/BH ratio increased significantly 12 h after BH-MH soln. taken. Exposure of morphine before test could decrease the BH-MH/BH ratio dose-dependently. Morphine could reinforce significantly the morphine drinking motivation, which was related to drug-taking schedule.

## LS ANSWER 3 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:417714 CAPLUS

DOCUMENT NUMBER: 131:84831

TITLE: Cloning of cDNA for

(S)-1'-hydroxy-N-methylclaurine-

4'-O-methyl transferase from *Coptis japonica* and use for producing therapeutical alkaloids

INVENTOR(S): Sato, Fumihiro; Yamada, Yasuyuki

PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|-------------|------|----------|-----------------|----------|
| JP 11178579 | A2   | 19990706 | JP 1997-355120  | 19971224 |

AB The cDNA encoding noroclaurine (S)-1'-hydroxy-N-methylclaurine-4'-O-Me transferase, which catalyzes the transfer of the S-Me group of S-adenosyl-L-methionine to the 4'-hydroxyl group of (S)-1'-hydroxy-N-methylclaurine to produce reticuline, is isolated from *Coptis japonica* Makino var. *Dissecta* (Yatabe) Nakai. The cDNA can be used for producing secondary metabolites including berberine-, morphine-, and papaverine-type alkaloids from claurine or reticuline in transgenic plant (e.g. *Coptis* or *Papaver*), plant tissues, or plant cells.

## LS ANSWER 4 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:417712 CAPLUS

DOCUMENT NUMBER: 131:84830

TITLE: Cloning of cDNA for noroclaurine 6-O-methyl transferase from *Coptis japonica* and use for

producing

therapeutical alkaloids

INVENTOR(S): Sato, Fumihiro; Yamada, Yasuyuki

PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 27 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|-------------|------|----------|-----------------|----------|
| JP 11178577 | A2   | 19990706 | JP 1997-355045  | 19971224 |

AB The cDNA encoding noroclaurine 6-O-Me transferase, which catalyzes the transfer of the S-Me group of S-adenosyl-L-methionine to the 6-hydroxyl group of noroclaurine to produce claurine, is isolated from *Coptis japonica* Makino var. *Dissecta* (Yatabe) Nakai. The cDNA can be used for producing secondary metabolites including berberine-, morphine-, and papaverine-type alkaloids from claurine or reticuline in transgenic plant (e.g. *Coptis* or *Papaver*), plant tissues, or plant cells.

LS ANSWER 5 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1984:96484 CAPLUS

DOCUMENT NUMBER: 100:96424

TITLE: Antisecretory effects of berberine with morphine,  
clonidine, L-phenylephrine, yohimbine or neostigmine  
in pig jejunum

AUTHOR(S): Zhu, Beilei; Arends, Franklin

CORPORATE SOURCE: Coll. Vet. Med., Iowa State Univ., Ames, IA, 50011,

USA

SOURCE: European Journal of Pharmacology (1983), 96(1-2),

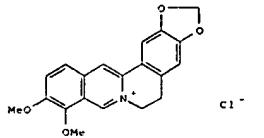
11-19

CODEN: EJPHEZ; ISSN: 0014-2999

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



AB The effects of berberine (I) [2086-83-1] alone or in combination with morphine [57-27-2], clonidine [4205-90-7], L-phenylephrine [614-03-9] or yohimbine [146-48-5] were compared in Escherichia coli heat-stable enterotoxin (ST)-exposed ligated jejunal loops in 2 wk old pigs. In addn., net water and electrolyte fluxes in normal jejunal loops were measured in the presence of neostigmine methylsulfate [51-60-5], morphine, clonidine, L-phenylephrine or yohimbine alone or in combination with berberine. Berberine, morphine, clonidine and L-phenylephrine each reduced the net secretion of water and electrolytes induced by ST. A significant enhancement of antisecretory effect was obstd. only with the combination of berberine and L-phenylephrine. Yohimbine or neostigmine augmented the net loss of water and electrolytes produced by ST. Yohimbine did not block the antisecretory action of berberine. In normal jejunum, there was no significant difference in water and ion absorption between adrenergic or opiate agonists alone and their combination with berberine. Neostigmine reversed absorption to net secretion in normal jejunum and this effect was significantly reduced by berberine. The antisecretory action of berberine appears similar to that of .alpha.2-adrenergic agonists, opiates, and anticholinergic agents.

```
=> s morphine
    40765 MORPHINE
    170 MORPHINES
L6      40813 MORPHINE
        (MORPHINE OR MORPHINES)

=> s berberine
    3834 BERBERINE
    83 BERBERINES
L7      3853 BERBERINE
        (BERBERINE OR BERBERINES)

=> s l6 and l7
L8      147 L6 AND L7

=> s l8 and treat
    67561 TREAT
    8030 TREATS
    75188 TREAT
        (TREAT OR TREATS)
L9      1 L8 AND TREAT

=> s l8 and analgesic
    42113 ANALGESIC
    41945 ANALGESICS
    55704 ANALGESIC
        (ANALGESIC OR ANALGESICS)
L10     9 L8 AND ANALGESIC

=> d ibib abs tot
```

L10 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2006:666025 CAPLUS  
 DOCUMENT NUMBER: 145:152690  
 TITLE: Method for inducing crystalline state transition in pharmaceuticals  
 INVENTOR(S): Nakamichi, Kouichi; Izumi, Shougo; Oka, Masashi  
 PATENT ASSIGNEE(S): Nippon Shinyaku Company, Ltd., Japan  
 SOURCE: U.S., 16 pp., Cont.-in-part of U. S. 5,456,923.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|--|------|----------|-----------------|----------|
| US 5811547   | A    | 19980922 | US 1995-416815  | 19950609 |
| CA 2147279   | AA   | 19940429 | CA 1993-2147279 | 19931013 |
| WO 9408511   | A1   | 19940429 | WO 1993-JP1469  | 19931013 |
| W: AU, BR, CA, FI, HU, JP, KR, NO, NZ, RU, US<br>P: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE |      |          |                 |          |
| AU 9351607   | A1   | 19940509 | AU 1993-51607   | 19931013 |
| EP 665009  | A1   | 19950502 | EP 1993-922625  | 19931013 |
| EP 665009  | BI   | 20000216 |                 |          |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT  |      |          |                 |          |

SE AT 199770 E 20000315 AT 1993-922625 19931013  
 ES 2145063 T3 20000701 ES 1993-922625 19931013  
 US 5456923 A 19951010 US 1993-129133 19931115

PRIORITY APPLN. INFO.: JP 1992-303085 A 19921014

AB This invention has for its object to provide a method of inducing a transition in cryst. state of a crystallizable pharmaceutical with great ease and improved efficiency and uniformity on a high prodn. scale. An extruder is used for inducing a transition from one cryst. state (.DELTA.) to another cryst. state in a crystallizable pharmaceutical. An extruded indomethacin (form .alpha.) was converted to an amorphous form.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L10 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2004:806390 CAPLUS  
 DOCUMENT NUMBER: 142:5251  
 TITLE: The roles of latex and the vascular bundle in morphine biosynthesis in the opium poppy, Papaver somniferum  
 AUTHOR(S): Weil, Marion; Ziegler, Joerg; Kutchan, Toni M.  
 CORPORATE SOURCE: Leibniz-Institut fuer Pflanzenbiochemie, Halle/Saale, 06120, Germany  
 SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2004), 101(38), 13957-13962  
 PUBLISHER: National Academy of Sciences  
 DOCUMENT TYPE: Journal Article  
 LANGUAGE: English

AB The opium poppy, Papaver somniferum, is one of mankind's oldest medicinal plants. Opium poppy today is the com. source of the narcotic analgesics morphine and codeine. Along with these two morphinans, opium poppy produces approx. eighty alkaloids belonging to various tetrahydroisoquinoline-derived classes. It has been known for over a century that morphinan alkaloids accumulate in the latex of opium poppy. With identification of many of the enzymes of alkaloid biosynthesis in this plant, biochemical data suggested involvement of multiple cell types in alkaloid biosynthesis in poppy. Herein the immunolocalization of five enzymes of alkaloid formation in opium poppy is reported: (P,S)-3'-hydroxy-N-methylclaurine 4'-O-methyltransferase, the berberine bridge enzyme of the sanguinarine pathway, the berberine bridge enzyme of the sanguinarine pathway, and salutaridinol 7-O-acetyltransferase and codeinone reductase, which lead to morphine. In capsule and stem both O-methyltransferases and the O-acetyltransferase are found predominantly in parenchyma cells within the vascular bundle, and codeinone reductase

is localized to latexifiers, the site of morphinan alkaloid accumulation. In developing root tip, both O-methyltransferases and the O-acetyltransferase are found in the pericycle of the stele, and the berberine bridge enzyme is localized to parenchyma cells of the root cortex. Latexifiers are not found in developing root tip, and, likewise, codeinone reductase was not detected. These results provide cell-specific localization that gives a coherent picture of the spatial distribution of alkaloid biosynthesis in opium poppy.

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L10 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2005:469196 CAPLUS  
 DOCUMENT NUMBER: 143:147399  
 TITLE: Sanguinarine biosynthesis is associated with the endoplasmic reticulum in cultured opium poppy cells after elicitor treatment

AUTHOR(S): Vincent  
 CORPORATE SOURCE: Department of Biological Sciences, University of Calgary, Alberta, T2N 1N4, Can.

SOURCE: Plant Physiology (2005), 138(1), 173-183

CODEN: PLPHAY ISSN: 0032-0889

PUBLISHER: American Society of Plant Biologists

DOCUMENT TYPE: Journal Article

LANGUAGE: English

AB Three key benzylisoquinoline alkaloid biosynthetic enzymes, (S)-N-methylclaurine-3'-hydroxylase (CYP80B1), berberine bridge enzyme (BBE), and codeinone reductase (COR), were localized in cultured opium poppy (Papaver somniferum) cells by sucrose d. gradient fractionation and immunogold labeling. CYP80B1 catalyzes the second to last step in the formation of (S)-reticuline, the least common intermediate in sanguinarine and morphine biosynthesis. BBE converts (S)-reticuline to (S)-sanguinarine as the first committed step in sanguinarine biosynthesis, and COR catalyzes the penultimate step in the branch pathway leading to morphine. Sanguinarine is an antimicrobial alkaloid that accumulates in the vacuoles of cultured opium poppy cells in response to elicitor treatment, whereas the narcotic analgesic morphine, which is abundant in opium poppy plants, is not produced in cultured cells. CYP80B1 and BBE were rapidly induced to high levels in response to elicitor treatment. By contrast, COR levels were constitutive in the cell cultures, but remained low and were not induced by addn. of the elicitor. Western blots performed on protein homogenates from elicitor-treated cells fractionated on a sucrose d. gradient showed the cosegregation of CYP80B1, BBE, and sanguinarine with calotropin, and COR with glutathione S-transferase. Calotropin and glutathione S-transferase are markers for the endoplasmic reticulum (ER) and the cytosol, resp. In response to elicitor treatment, large dilated vesicles rapidly developed from the lamellar ER of control cells and fused with the central vacuole. Immunogold localization supported the assocn. of CYP80B1 and BBE with ER vesicles, and COR with the cytosol in elicitor-treated cells. Our results show that benzylisoquinoline biosynthesis and transport to the vacuole are assocd. with the ER, which undergoes major ultrastructural modification in response to the elicitor treatment of cultured opium poppy cells.

REFERENCE COUNT: 62 THERE ARE 62 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L10 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2004:387262 CAPLUS

DOCUMENT NUMBER: 140:368726

TITLE: Medicament component of berberine for the use of prevention and treatment of psychological dependence on and analgesic tolerance to morphine

AUTHOR(S): Jang, Choon-Gon; Lee, Seok-Yong  
 PATENT ASSIGNEE(S): Sungkyunkwan University, S. Korea

SOURCE: PCT Int. Appl., 19 pp.

CODEN: PIIXDZ

DOCUMENT TYPE: Patent Application

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE     |
|---|------|----------|------------------|----------|
| WO 2004039372   | A1   | 20040513 | WO 2003-KR2280   | 20031027 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LS, LT, LU, LV, MA, MD, MG, MK, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW<br>RW: GH, GM, KE, LS, MW, MZ, SD, SI, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG |      |          |                  |          |
| KR 2004037511   | A    | 20040507 | KR 2002-66029    | 20021029 |
| AU 2003273114   | A1   | 20040525 | AU 2003-273114   | 20031027 |
| CN 1713911  | A    | 20051226 | CN 2003-80102287 | 20031027 |
| JP 2006506460   | T2   | 20060223 | JP 2005-501862   | 20021027 |
| US 2006035917   | A1   | 20060216 | US 2005-532196   | 20050421 |

PRIORITY APPLN. INFO.: KR 2002-66029 A 20021029

WO 2003-KR2280 W 20031027

AB Disclosed is a pharmaceutical compn. for preventing and treating addiction

to morphine or preventing and inhibiting the development of tolerance to the analgesic effects of morphine, contg. berberine as an effective ingredient, wherein the berberine has an inhibitory effect vs. psychol. dependence on abused drugs such as morphine and the increase of spontaneous locomotor activity upon administration of the drugs. The pharmaceutical compn. and a Coptis japonica plant ext. of the invention, which contain berberine, are highly effective in inhibiting the aforementioned symptoms of morphine addiction, and are thus useful for prevention and treatment of addiction to abused drugs such as morphine. In addn., the pharmaceutical compn. addnl. contg. a pharmaceutically acceptable carrier can be applied to prevent and inhibit morphine tolerance caused by repeated administration of morphine, while not affecting the analgesic effects of morphine upon a single administration.

L10 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2004:220186 CAPLUS  
 DOCUMENT NUMBER: 140:276172  
 TITLE: Taste masked dosage forms comprising acrylic polymers  
 and processes for their preparation  
 INVENTOR(S): Murpani, Deepak; Arora, Vinod Kumar; Malik, Rajiv  
 PATENT ASSIGNEE(S): Ranbaxy Laboratories Limited, India  
 SOURCE: PCT Int. Appl., 23 pp.  
 CODEN: PIKKD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE       |
|--|------|----------|-----------------|------------|
| WO 2004022037  | A1   | 20040318 | WO 2003-183779  | 20030904   |
| M: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,<br>CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,<br>GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,<br>LS, LT, LV, MA, MD, MG, MK, MU, MM, MX, MZ, NI, NO, NZ, OM,<br>PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,<br>TF, TT, TZ, UA, UG, US, VC, VN, YU, ZA, ZM, ZW |      |          |                 |            |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZN, AM, AZ, BY,<br>KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,<br>FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,<br>BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MP, NE, SN, TD, TG  |      |          |                 |            |
| IN 194510  | A    | 20041120 | IN 2002-DE903   | 20020904   |
| CA 249717  | AA   | 20040318 | CA 2003-2497176 | 20030904   |
| AU 2003259417  | A1   | 20040319 | AU 2003-259417  | 20030904   |
| EP 1516771   | A1   | 20050508 | EP 2003-793976  | 20030904   |
| P: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,<br>IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK   |      |          |                 |            |
| BR 2003104036  | A    | 20050712 | BR 2003-14036   | 20030904   |
| CN 1689292   | A    | 20051036 | CN 2003-824574  | 20030904   |
| JP 2006502156  | T2   | 20060119 | JP 2004-537343  | 20030904   |
| US 2006039981  | A1   | 20060223 | US 2005-526844  | 20050727   |
| PRIORITY APPLN. INFO.:   |      |          | IN 2002-DE903   | A 20020904 |
|  |      |          | NO 2003-1B3779  | W 20030904 |

AB The invention relates to taste masked dosage forms utilizing low amounts of taste masking polymer, and simple and economical processes for the prepn. of the taste masked dosage forms. The taste-masked dosage form includes one or more drugs and one or more cationic polymers synthesized from dimethylaminomethyl methacrylate and neutral methacrylic acid esters. The w/w ratio of the drug to polymer is less than about one to two. Hard gelatin capsules contained copipramine 15, Eudragit EPO 26, Et cellulose (low viscosity) 3.7, titanium dioxide 1.0, nonpareil seeds 45.3, talc 5.9, iso-Pr alc./water (3:1) q.s. 100%.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2000:150315 CAPLUS  
 DOCUMENT NUMBER: 152:319873  
 TITLE: Distribution of morphinan and benzo[c]phenanthridine alkaloid gene transcript accumulation in Papaver somniferum

AUTHOR(S): Huang, Fong-Chun; Kutchan, Toni M.  
 CORPORATE SOURCE: Leibniz-Institut für Pflanzenbiochemie, Halle/Saale, 06120, Germany  
 SOURCE: Phytochemistry (2000), 53(5), 555-564  
 CODEN: PYTCAS; ISSN: 0031-9422  
 PUBLISHING: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB The opium poppy *Papaver somniferum* L. produces the antimicrobial benzocyclophenanthridine alkaloid sanguinarine and the narcotic analgesic morphinan alkaloid morphine. Transcripts of three genes of alkaloid biosynthesis in *P. somniferum* in developing seedlings, mature plants and plant cell suspension culture were monitored for temporal/spatial or for Me jasmonate-induced accumulation by RNA gel blot anal. These genes encoded (S)-N-methylcoelurazine 3'-hydroxylase (CYP80B1) that is common to morphine and sanguinarine biosynthesis, the berberine bridge enzyme (BBE) that lies on the pathway to sanguinarine, and codeinone reductase (COR) the penultimate enzyme of morphine biosynthesis. In developing *P. somniferum* seedlings, the morphine precursor thebaeine was present throughout the first twenty days of germination. In contrast, sanguinarine was present in detectable quantities only after day five after germination and continued to increase at least until day twenty. Accumulation of cyp80b1, bbe and corl gene transcripts paralleled these differences. In the mature poppy plant, cyp80b1, bbe and corl gene transcripts were detected in the root, the stem, the leaf lamina and the leaf mid rib. Only cyp80b1 and corl, however, were found in the flower bud and the capsule. Consistent with the fact that sanguinarine accumulation, but not that of morphine, can be induced in opium poppy cell suspension culture by addn. of Me jasmonate to the culture medium, cyp80b1 and bbe, but not corl transcript accumulated in response to elicitor treatment.

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2003:927879 CAPLUS  
 DOCUMENT NUMBER: 140:214072  
 TITLE: A tale of three cell types: alkaloid biosynthesis is localized to sieve elements in opium poppy  
 AUTHOR(S): Bird, David A.; Franceschi, Vincent R.; Facchini, Peter J.  
 CORPORATE SOURCE: Department of Biological Sciences, University of Calgary, Calgary, AB, T2N 1N4, Can.  
 SOURCE: Plant Cell (2003), 15(11), 2626-2635  
 CODEN: PLCEEW; ISSN: 1040-4651  
 PUBLISHER: American Society of Plant Biologists  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Opium poppy produces a diverse array of pharmaceutical alkaloids, including the narcotic analgesics morphine and codeine. The benzylisoquinoline alkaloids of opium poppy accumulate in the cytoplasm, or latex, of specialized laticifers that accompany vascular tissues throughout the plant. However, immunofluorescence labeling using affinity-purified antibodies showed that three key enzymes, (S)-N-methylcoelurazine 3'-hydroxylase (CYP80B1), berberine bridge enzyme (BBE), and codeinone reductase (COR), involved in the biosynthesis of morphine and the related antimicrobial alkaloid sanguinarine, are restricted to the parietal region of sieve elements adjacent or proximal to laticifers. The localization of laticifers was demonstrated using antibodies specific to the major latex protein (MLP), which is characteristic of the cell type. In-situ hybridization showed that CYP80B1, BBE, and COR gene transcripts were found in the companion cell paired with each sieve element, whereas MLP transcripts were restricted to laticifers. The biosynthesis and accumulation of alkaloids in opium poppy involve cell types not implicated previously in plant secondary metab., and alkaloid formation dramatically extends the function of sieve elements beyond the transport of solutes and information macromols. in plants.

REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1971:67717 CAPLUS  
 DOCUMENT NUMBER: 74:97717  
 TITLE: Pharmacological actions of berberine on central nervous system  
 AUTHOR(S): Shanbhag, S. M.; Kulkarni, H. J.; Gaitonde, Bhikayi B.  
 CORPORATE SOURCE: Dep. Pharmacol., Grant Med. Coll., Bombay, India  
 SOURCE: Japanese Journal of Pharmacology (1970), 20(4), 492-7  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

GI For diagram(s), see printed CA Issue.

AB Berberine (I) produced sedation when given, i.p. to cats and mice, or intraventricularly to cats, and potentiated the pentobarbitone sleeping time. I had no tranquilizing anticonvulsant, or analgesic action. It did not affect morphine analgesia or barbiturate hyperalgesia.

L10 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN  
ACCESSION NUMBER: 1963:434911 CAPLUS  
DOCUMENT NUMBER: 59:34911  
ORIGINAL PREFERENCE NO.: 59:61999  
TITLE: Rapid separation of drugs and poisons by  
high-temperature reversed-phase paper chromatography.  
III. Alkaloids  
AUTHOR(S): Street, Harold V.  
CORPORATE SOURCE: Univ. Edinburgh, UK  
SOURCE: Acta Pharmacologica et Toxicologica (1962), 19, 325-9  
CODEN: APTOA6; ISSN: 0001-6683  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB The high-temp. (65 and 95.degree.) reversed-phase paper chromatography  
technique was applied to 31 alkaloids whose R<sub>f</sub> values were studied at 6  
PH values from 1 to 10.6. Analgesic compds. with a close chem.  
structural relation, dextromoramide, dipipanone, and methadone were sepd.  
in 17 min. with a solvent pH of 4.52 at 95.degree..

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